

CHAPTER 2C. WARNING SIGNS

Section 2C.02 Application of Warning Signs

The following is added to this section:

Option:

Warning signs may be supplemented with a yellow flashing beacon.

Section 2C.03 Design of Warning Signs

The following is added to this section:

Support:

Sign design details are contained in FHWA's "Standard Highway Signs" book and Department of Transportation's "Traffic Sign Specifications". See Section 1A.11 for information regarding these publications.

Table 2C-101 shows a list of California Warning Signs.

Figure 2C-101 shows California Warning Signs.

The use of educational plaques to supplement symbol signs is described in Section 2A.13.

Section 2C.05 Placement of Warning Signs

The following is added to this section:

Standard:

Warning signs shall be installed in accordance with the general requirements for sign placement as described in Sections 2A.16 to 2A.21 and as shown in Figure 2A-1 (CA).

Section 2C.06 Horizontal Alignment Signs (W1-1 through W1-5, W1-11, W1-15)

Guidance:

In Paragraph 6 ("An Advisory Speed..."), the first sentence ("An Advisory Speed...") is deleted and replaced with the following:

An Advisory Speed (W13-1) plaque (see Section 2C.46) should be used to indicate the speed for the change in horizontal alignment when the advisory speed is less than the applicable speed limit.

The following is added to this section:

Standard:

The advisory speed shall be determined in accordance with Section 2C.101.

Guidance:

The Winding Road (W1-5) sign should be used where there is a series of turns or curves which requires driving caution, and where curve or turn signs would be too numerous to be effective. This sign should be erected in advance of the second curve of the winding section of highway. The first curve should be marked with a curve or turn sign and an Advisory Speed (W13-1) plaque. Where the winding road is 1.6 km (1 mi) or more in length, a Next Distance (W7-3a) plaque should supplement the W1-5 sign. Where any of the curves has an advisory speed that is 15 km/h (10 mph) or more below that of the first curve then it should be posted with a curve or turn sign and an Advisory Speed (W13-1) plaque.

Option:

The WINDING LEVEE ROAD (CA Code SW22-1) sign may be used to warn road users of the roadway alignment where the use of curve warning signs have been determined not to be appropriate.

The Speed/Distance (CA Code SW22-1A) plaque may be installed below the SW22-1 (CA Code) sign. The Next Distance (W7-3a) plaque may be used when there is no advisory speed.

Standard:

If used, the Speed/Distance (CA Code SW22-1A) plaque shall be installed below the SW22-1 (CA Code) sign.

Table 2C-101. List of California Warning Signs (Sheet 1 of 5)

California (CA) Code	MUTCD Code	Title of Sign	Supplement Section	MUTCD Section
W1	W1-4	Reverse Curve	2C.06	2C.06
W2	W1-3	Reverse Turn	2C.06	2C.06
W3	W1-1	Turn	2C.06	2C.06
W4 Series	W1-1a	Combination Turn/Advisory Speed	2C.07	2C.07
W4 Series	W1-2a	Combination Curve/Advisory Speed	2C.07	2C.07
W5	W1-2	Curve	2C.06	2C.06
W6	W13-1	Advisory Speed Plaque	2C.06, 2C.46, 2C.101	2C.06, 2C.46, 5C.10, 8B.17
W7	W2-4	T-Symbol	2C.37	2C.37
W7A	W2-2	Side Road	2C.37	2C.37
W8	W2-5	Y-Symbol	2C.37	2C.37
W9	W2-1	Cross Road	2C.37	2C.37
W10	W10-2	Highway-Rail Grade Crossing Advance Warning (Cross Road)	8B.04, 10C.15	8B.04, 10C.15
W10A	W10-3	Highway-Rail Grade Crossing Advance Warning (Side Road)	8B.04, 10C.15	8B.04, 10C.15
W10B	W10-4	Highway-Rail Grade Crossing Advance Warning (T-Intersection)	8B.04, 10C.15	8B.04, 10C.15
W11	W4-2	Lane Ends	2C.33	2C.33
W11-1	None	(HOV) Lane Reduction	2C.119	None
W14	W1-5	Winding Road	2C.06	2C.06
W15	W5-1	ROAD NARROWS	6F.26	2C.15
W17	W3-1	Stop Ahead	2C.29	2C.29, 5C.04, 8B.08, 10C.04
W18	W8-4	SOFT SHOULDER	None	2C.26, 6F.42
W19	W8-3	PAVEMENT ENDS	None	2C.25, 5C.08
W20	None	Weight Limit	2B.49	None
W20A	None	Weight Limit	2B.49	None
W23	W5-2	NARROW BRIDGE	2C.16	2C.16, 5C.05
W25	W6-1	Divided Highway (Road)	2C.18	2C.18
W26	W6-2	Divided Highway (Road) Ends	2C.19	2C.19
W28	W3-2	Yield Ahead	2C.29	2C.29, 5C.04, 8B.08, 10C.04
W29	W7-1	Hill	None	2C.12, 5C.07
W29-1	W7-1b	Combination Hill/Grade	None	2C.12
W29A	W7-3	___ % GRADE Plaque	None	2C.12, 2C.48
W29B	W7-3b	___ % GRADE (X MILES) Plaque	None	2C.12, 2C.48
W29C	W7-2b	TRUCKS USE LOWER GEAR Plaque	None	2C.48
W30	W7-4	RUNAWAY TRUCK RAMP (X MILE)	2C.13	2C.13

Table 2C-101. List of California Warning Signs (Sheet 2 of 5)

California (CA) Code	MUTCD Code	Title of Sign	Supplement Section	MUTCD Section
W30A	W7-4b	RUNAWAY TRUCK RAMP Arrow	2C.13	2C.13
W30B	None	DEEP GRAVEL	2C.13	None
W30C	None	RIGHT(LEFT) EXIT	2C.13	None
W31	None	END	2C.21	None
W31A	None	ROAD ENDS ____ FT	2C.21	None
W32	W8-2	DIP	None	2C.23
W33	W8-8	ROUGH ROAD	2C.102	None
W34	W12-2	Low Clearance	2C.22	2C.22
W34A	None	Distance Ahead Plaque	2B.49, 2C.22, 2C.45	None
W34B	W12-2P	____ FT ____ IN Plaque	2C.22	2C.22
W34C	None	CAUTION VERTICAL CLEARANCE ____' ____" Arrow	2C.22	None
W36	W5-3	ONE LANE BRIDGE	2C.17	2C.17, 5C.06
W37	W8-1	BUMP	None	2C.23
W38	None	SLIDE AREA	2C.105	None
W41	W3-3	Signal Ahead	2C.29, 4D.20, 4K.102	2C.29
W41A	W3-3a	SIGNAL AHEAD	2C.29	2C.29
W42	W8-5	Slippery When Wet	None	2C.27
W43	None	ICY	2C.103	None
W44	W6-3	Two-Way Traffic	2C.34, 3B.07, 5E.03, 6F.30	2C.19, 2C.34, 6F.30
W44-1	W6-4	Opposing Traffic Lane Divider	6F.70	6F.70
W44A	None	TWO WAY TRAFFIC Plaque	2C.34	None
W45	W11-7	Equestrian	2C.41	2C.41
W46	W10-1a	EXEMPT	8B.05, 10C.10	8B.05, 10C.10
W46A	None	EXEMPT 2W-5.1-C	8B.05	None
W47	W10-1	Highway-Rail Grade Crossing Advance Warning	8B.04, 10C.15	8B.04, 10C.15
W48	None	Number of Tracks	8B.04, 10C.15	None
W49	None	DRAW BRIDGE	2C.104	None
W50	None	ROCK SLIDE AREA	2C.105	None
W50-1	None	Rock Slide Area	2C.105	None
W51	None	SLOW TRUCKS	2C.106	None
W53A	W14-2	NO OUTLET	None	2C.21, 5C.11
W54A	W11-2	Pedestrian Crossing	2C.41	2C.41
W55	None	FLOODED	2C.107	None
W55B	None	SUBJECT TO FLOODING	2C.107	None

Table 2C-101. List of California Warning Signs (Sheet 3 of 5)

California (CA) Code	MUTCD Code	Title of Sign	Supplement Section	MUTCD Section
W56	W1-7	Two-Direction Large Arrow	2C.38	2C.38
W57	W1-6	One-Direction Large Arrow	2C.09	2C.09, 6F.64
W58	W12-1	Double Arrow	None	2C.20
W59	W4-1	Merge	2C.31	2C.31
W59-1	None	(HOV) Merge	2C.119	None
W60	W4-3	Added Lane	2C.32	2C.32
W61 Series	None	Lane Drop Panels	2E.20	2E.20
W62	W11-5	Farm Equipment	2C.40	2C.40
W63	S1-1	School Advance Warning	7B.08, 7B.09, 7B.101	7B.07, 7B.08, 7B.09
W64	S3-1	SCHOOL BUS STOP AHEAD	7B.10	7B.07, 7B.10
W65	S4-3	SCHOOL Plaque	7B.08	7B.07, 7B.09, 7B.11
W65-1	S5-2	END SCHOOL ZONE	None	7B.13
W67	W11-4	Cattle Crossing	2C.41	2C.41
W68	W11-3	Deer Crossing	2C.41	2C.41
W69	None	END FREEWAY (X MILE)	2C.108	None
W70	None	CROSS TRAFFIC AHEAD	2C.108	None
W71	W7-3a	Next Distance Plaque	2C.06, 2C.45	2C.45, 5C.09, 6F.49
W72	W13-2	Advisory Exit Speed	2C.36	2C.36
W72A	W13-3	Advisory Ramp Speed	2C.36	2C.36
W72B	None	(HOV) Advisory Exit(Ramp) Speed	2C.119	None
W73	None	RIGHT(LEFT) LANE EXITS AHEAD	2C.109	None
W73A	None	RIGHT(LEFT) LANE TURNS RIGHT(LEFT) AHEAD	2C.109	None
W74	W4-1a	THRU TRAFFIC MERGE LEFT (RIGHT)	2B.21, 2C.109	None
W74-1	None	(HOV) THRU TRAFFIC MERGE LEFT (RIGHT)	2C.119	None
W75	W9-2	LANE ENDS MERGE LEFT (RIGHT)	2C.33	2C.33
W75-1	None	(HOV) LANE ENDS MERGE LEFT (RIGHT)	2C.119	None
W79	W11-1	Bicycle Crossing	2C.40, 9C.04	2C.40, 9B.17
W79A	W16-1	SHARE THE ROAD	2C.40	2C.51, 9B.18
W81	W1-8	Chevron Alignment	2C.10	2C.10, 5C.02
W82	None	Light Rail Transit (Trolley) Crossing	10C.101	None
W82-1	None	Light Rail Transit (Trolley) Crossing /LOOK BOTH WAYS	10C.101	None
W83	None	PASS WITH CARE	2C.34	None
SW1	W4-4P	CROSS TRAFFIC DOES NOT STOP	None	2C.50

Table 2C-101. List of California Warning Signs (Sheet 4 of 5)

California (CA) Code	MUTCD Code	Title of Sign	Supplement Section	MUTCD Section
SW4-1	None	WATCH DOWNHILL SPEED	2C.48	None
SW17-1	None	TRAILERS-CAMPERS-GUSTY WIND AREA NEXT ____ MILES	2C.120	None
SW21B	W11-8	Emergency Vehicle	2C.40	2C.40, 4F.02
SW22-1	None	WINDING LEVEE ROAD	2C.06	None
SW22-1A	None	Speed/Distance Plaque	2C.06	None
SW26	None	SIGNAL/STOP AHEAD Arrow	2C.29	None
SW27	W10-12	Skewed Crossing Sign	8B.19	8B.19, 10C.19
SW28	None	STEEL BRIDGE DECK	2C.121	None
SW32	None	DRIFTING SAND	2C.110	None
SW35	None	FLASH FLOOD AREA	2C.107	None
SW36	None	END FREEWAY	2C.108	None
SW37	None	TUNNEL	2C.111	None
SW38	None	DEAF CHILDREN NEAR	2C.112	None
SW40	W8-6	TRUCK CROSSING	2C.40	2C.40, 5C.09, 6F.34
SW41	None	SNOW SLIDE AREA	2C.105	None
SW44	None	Downward Arrow	2C.113	None
SW45	None	GROOVED PAVEMENT	2C.114	None
SW46	None	WATCH FOR SNOW SLIPPERY	2C.115	None
SW47	None	OFF HIGHWAY VEHICLES	2C.116	None
SW48	None	TRACTOR-SEMI OVER (X FEET) KINGPIN TO REAR AXLE NOT ADVISED	2C.117	None
SW48-1	None	NEXT RIGHT	2C.117	None
SW49	None	PLAYGROUND	2C.42	None
SW50	None	SENIOR CITIZEN FACILITY	2C.118	None
SW51	W11-6	Snowmobile	2C.40	2C.41
SW52	None	EMERGENCY VEHICLES	2C.40	2C.40
SW54	None	(HOV) Lane Selection (Left or Right Arrow)	2C.119	None
SW54-1	None	(HOV) Lane Selection (Left or Right and Vertical Arrow)	2C.119	None
SW54A	None	CARPOOL IS 2 OR MORE PER VEHICLE	2C.119	None
SW54B	None	CARPOOL IS 2 OR MORE PER VEHICLE Specific Hours/Days	2C.119	None
SW54C	None	CARPOOL IS 2 OR MORE PER VEHICLE WHEN METERED	2C.119	None
SW55	W14-3	NO PASSING ZONE	None	2B.29, 2C.35, 6F.72
SW56	W11-11	Golf Cart	2C.40	2C.40

Table 2C-101. List of California Warning Signs (Sheet 5 of 5)

California (CA) Code	MUTCD Code	Title of Sign	Supplement Section	MUTCD Section
SW58	None	WATCH FOR SNOW REMOVAL EQUIPMENT	2C.115	None
SW59	None	Migrating Bears	2C.41	2C.41

**Figure 2C-101. California Warning Signs
(Sheet 1 of 3)**



W11-1



W20



W20A



W30B



W30C



W31



W31A



W34A



W34C



W38



W43



W44A



W46A



W48



W49



W50



W50-1



W51



W55



W55B



W59-1



W61A



W61B



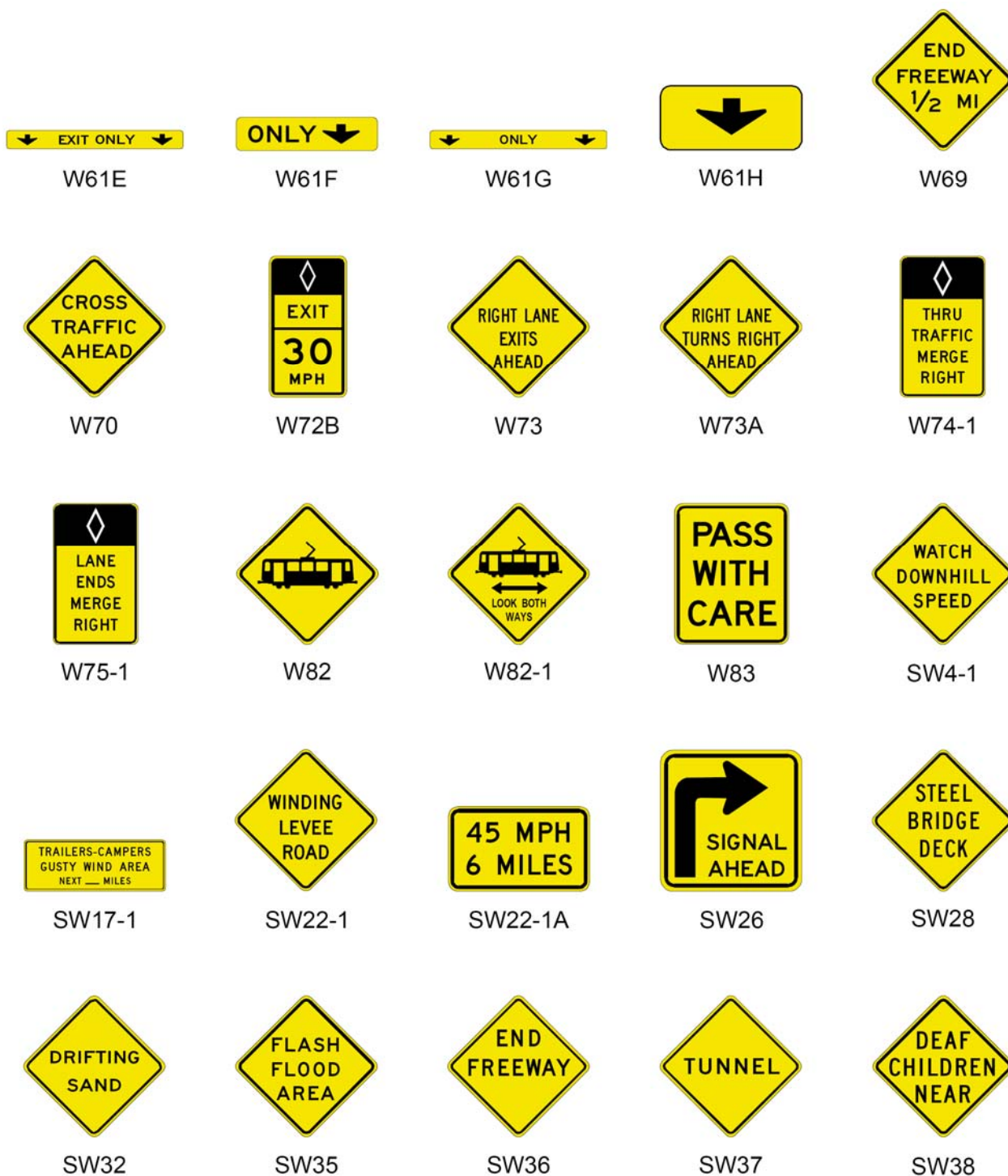
W61C



W61D

Note: All sign codes are California (CA) Codes.

**Figure 2C-101. California Warning Signs
(Sheet 2 of 3)**



Note: All sign codes are California (CA) Codes.

**Figure 2C-101. California Warning Signs
(Sheet 3 of 3)**



SW41



SW44



SW45



SW46



SW47



SW48



SW48-1



SW49



SW50



SW52



SW54



SW54-1



SW54A



SW54B



SW54C



SW58



SW59

Note: All sign codes are California (CA) Codes.

Figure 2C-1. Horizontal Alignment Signs**Standard:**

No sign shall have a metric unit or message, except per CVC 21351.3. Hence, the following signs shall not be used in California with metric messages unless specifically allowed per CVC 21351.3.

Combination Turn/Advisory Speed (W1-1a) Metric version.

Combination Curve/Advisory Speed (W1-2a) Metric version.

Section 2C.07 Combination Horizontal Alignment/Advisory Speed Signs (W1-1a, W1-2a)**Guidance:**

In Paragraph 2 (“When used,...”) first sentence, the phrase “and shall be installed” is changed to “and should be installed”.

The following is added to this section:

Support:

The combination Turn/Advisory Speed (W1-1a) sign (see Figure 2C-1), or combination Curve/Advisory Speed (W1-2a) sign (see Figure 2C-1) (CA Code W4 Series) is used at problem locations where the Horizontal Alignment (W1-1 through W1-5) signs have not proven to be effective.

Standard:

When used, combination Turn/Advisory Speed (W1-1a) sign (see Figure 2C-1), or combination Curve/Advisory Speed (W1-2a) sign (see Figure 2C-1) (CA Code W4 Series) shall be used in the head-on position and/or at the beginning of the turn or curve.

Guidance:

When used, the square shape should be used in the head-on position for combination Turn/Advisory Speed (W1-1a) sign (see Figure 2C-1), or combination Curve/Advisory Speed (W1-2a) sign (see Figure 2C-1) (CA Code W4 Series).

When used, the diamond shape should be used in the beginning of the turn or curve for the combination Turn/Advisory Speed (W1-1a) sign (see Figure 2C-1), or combination Curve/Advisory Speed (W1-2a) sign (see Figure 2C-1) (CA Code W4 Series).

Existing pavement markings should also be evaluated.

Standard:

The advisory speed shall be determined in accordance with Section 2C.101.

Section 2C.09 One-Direction Large Arrow Sign (W1-6)

The following is added to this section:

Guidance:

CA Type N-1 (OM1-3) object marker should be used below and on the same post as the W1-6 sign. See Chapter 3C.

Section 2C.10 Chevron Alignment Sign (W1-8)**Standard:**

In Paragraph 3 (“If used, Chevron...”), the phrase “If used, Chevron Alignment signs ...” is changed to “If used, a minimum of three Chevron Alignment signs...”.

Guidance:

In Paragraph 5 (“Spacing of Chevron Alignment signs...”), the phrase “at least two in view” is changed to “at least three in view”.

Figure 2C-2. Vertical Grade Signs**Standard:**

No sign shall have a metric unit or message, except per CVC 21351.3. Hence, the following signs shall not be used in California with metric messages unless specifically allowed per CVC 21351.3.

Supplemental Distance Plaque (W7-3a) Metric version.
Combination Distance/Grade Plaque (W7-3b) Metric version.

Section 2C.13 Truck Escape Ramp Signs (W7-4 Series)

Guidance:

In Paragraph 1 (“Where applicable...”), the last sentence (“No Parking (R8-3)...”) is replaced with the following:

NO STOPPING ANYTIME (CA Code R26A(S)) signs should be placed to keep motorists from stopping in the path of runaway trucks.

The following is added to this section:

Standard:

The DEEP GRAVEL (CA Code W30B) sign shall be placed on all truck escape ramps.

Guidance:

The W30B (CA Code) sign should be placed near the outside edge of the paved ramp prior to the beginning of the gravel bed. See Figure 3D-103 for Runaway Truck Ramp sign and marking details.

The RIGHT (LEFT) EXIT (CA Code W30C) sign should be used to indicate a right or left exit to a truck escape ramp.

Support:

Erect the W30C (CA Code) sign below and on the same post with the first W7-4 sign.

Figure 2C-3. Miscellaneous Warning Signs

Standard:

No sign shall have a metric unit or message, except per CVC 21351.3. Hence, the following signs shall not be used in California with metric messages unless specifically allowed per CVC 21351.3.

Low Clearance (W12-2) Metric version.

Low Clearance (W12-2P) Metric version.

Section 2C.16 NARROW BRIDGE Sign (W5-2)

Guidance:

In Paragraph 1 (“A NARROW BRIDGE (W5-2)...”), the phrase “4.9 to 5.5m (16 to 18 ft)” is changed to “4.9 to 8.5m (16 to 28 ft)”.

The following is added to this section:

Support:

See Figure 3D-104 for narrow bridge sign and marking details.

Section 2C.17 ONE LANE BRIDGE Sign (W5-3)

The following is added to this section:

Support:

See Figure 3D-104 for narrow bridge sign and marking details.

Section 2C.18 Divided Highway (Road) Sign (W6-1)

Standard:

Paragraph 2 (“The Word message...” is deleted.

The following is added to this section:

Support:

See Figure 3B-12 (CA) for signing and marking applications for lane reductions.

Section 2C.19 Divided Highway (Road) Ends Sign (W6-2)**Standard:**

Paragraph 3 (“The Word message...” is deleted.

The following is added to this section:

Support:

See Figure 3B-12 (CA) for signing and marking applications for lane reductions.

Section 2C.21 DEAD END/NO OUTLET Signs (W14-1, W14-1a, W14-2, W14-2a)

The following is added to this section:

Standard:

The NOT A THROUGH STREET (ROAD) sign (CA Code W53) is deleted and replaced with the DEAD END (W14-1) sign.

Option:

The existing W53 (CA Code) signs may remain in place until maintenance is required or existing inventory is depleted.

Option:

The END sign (CA Code W31) may be used where a street or highway ends.

Support:

Install in a head-on position in combination with an end-of-roadway marker. See Chapter 3C.

See Figure 3C-1 and 3C-101 for examples of object markers and more details.

Option:

The ROAD ENDS ----- FT sign (CA Code W31A) may be used in advance of the END sign (CA Code W31).

Section 2C.22 Low Clearance Signs (W12-2 and W12-2P)

The following is added to this section:

Standard:

The Low Clearance sign (W12-2) shall be used to warn motorists of low structure clearances.

For clearance 4.7 m (15.5 ft) or less, in addition to the W12-2P, two advance Low Clearance signs shall be installed on the right side of the roadway. The first W12-2 sign shall be placed in advance of the nearest intersecting street or highway or wide point in the road at which a motorist can detour or safely turn around.

Guidance:

A Distance Ahead (CA Code W34A) plaque should be placed below the W12-2 sign at this location.

Standard:

The second W12-2 sign shall be placed in advance of the structure.

Support:

No W34A (CA Code) plaque is needed at the second location.

Standard:

The W12-2 sign shall display the same clearance as shown on the W12-2P sign.

Guidance:

The Distance Ahead (CA Code W34A) plaque when used, should be placed below a W12-2 sign.

Standard:

The __ FT __ IN plaque (W12-2P) shall be used to warn motorists of structural clearance 4.7 m (15.5 ft) or less.

Guidance:

The W12-2P plaque should be centered over the traveled way on the approach side of all underpasses, overheads, viaducts, overcrossings, undercrossings, and grade separations for state highways.

Standard:

The W12-2P plaque shall not encroach over the shoulder area.

The W12-2P plaque shall display the minimum vertical clearance to the nearest inch, not exceeding the measured value.

The CAUTION, VERTICAL CLEARANCE ___' ___" Arrow sign (CA Code W34C) shall be used on all blind approaches to structures with clearances 4.7 m (15.5 ft) or less.

Support:

The W34C (CA Code) sign is used to warn motorists of low structure clearance around corners.

Guidance:

The W34C (CA Code) sign should be placed at a location where the motorist can detour or safely turn around before making the turn.

Standard:

The W34C (CA Code) sign shall display the same clearance as shown on the W12-2P sign.

Section 2C.26 Shoulder Signs (W8-4, W8-9, and W8-9a)

The following is added to this section:

Support:

The low shoulder condition (elevation difference up to 75 mm (3 in) between shoulder and the travel lane) is not treated as a permanent condition on State highways.

Standard:

The black on yellow background LOW SHOULDER (W8-9) sign shall not be used on State highways.

Option:

The black on orange background LOW SHOULDER (W8-9) sign may be used on State highways to warn of a shoulder condition where there is an elevation difference of less than 75 mm (3 in) between the shoulder and the travel lane. See Section 6F.42.

Section 2C.29 Advance Traffic Control Signs (W3-1, W3-2, W3-3, W3-4)**Standard:**

In Paragraph 5 ("Word messages..."), the word message signs, STOP AHEAD (W3-1a) and YIELD AHEAD (W3-2a) are deleted.

Paragraphs 10 ("The BE PREPARED TO STOP...") and 11 ("When the warning beacon...") are deleted. A warning beacon or WHEN FLASHING plaque shall not be used to supplement the BE PREPARED TO STOP sign. Studies indicate that these devices are generally not effective as warning devices for motorists approaching signalized intersections. The non-use of a warning beacon or WHEN FLASHING plaque also addresses the situation when a warning beacon is inoperative for any reason.

The following is added to this section:

Guidance:

The Stop Ahead sign (W3-1) should not be used in the approach to an intersection where there is channelization and the majority of the traffic turns to the right without being required to stop.

Option:

The STOP AHEAD pavement markings may be placed in accordance with Section 3B.19.

The SIGNAL AHEAD sign (W3-3a) may be used for overhead mastarm and overhead structure mounted locations.

The SIGNAL/STOP AHEAD Arrow sign (CA Code SW26) may be used in the head-on position where W3-1 and W3-3 signs have proven ineffective.

Guidance:

The W3-1 and W3-3 signs should be left in place when the SW26 (CA Code) sign is placed.

Figure 2C-5. Advisory Speed and Speed Reduction Signs**Standard:**

No sign shall have a metric unit or message, except per CVC 21351.3. Hence, the following signs shall not be used in California with metric messages unless specifically allowed per CVC 21351.3.

Speed Reduction (W3-5a) Metric version.

Speed (W13-1) Metric version.

Exit Speed (W13-2) Metric version.

Ramp Speed (W13-3) Metric version.

Curve Speed (W13-5) Metric version.

Section 2C.31 Merge Signs (W4-1, W4-5)

The following is added to this section:

Guidance:

When installed at freeway entrance ramps, the W4-1 sign should be installed in advance of the paved gore area.

Section 2C.32 Added Lane Signs (W4-3, W4-6)

The following is added to this section:

Guidance:

When installed at freeway entrance ramps, the sign should be installed in advance of the paved gore area.

Section 2C.33 Lane Ends Signs (W4-2, W9-1, W9-2)**Standard:**

For consistency, the LANE ENDS MERGE LEFT (RIGHT) (W9-2) sign is deleted, only Lane Ends (W4-2) symbol sign shall be used.

The following is added to this section:

Guidance:

The RIGHT (LEFT) LANE ENDS sign (W9-1) should be used in conjunction with the Lane Ends (W4-2) sign.

Support:

The W9-2 or W4-2 sign is not to be used for a lane drop at an exit.

See Figure 3B-12 (CA) for signing and marking applications for lane reductions.

Section 2C.34 Two-Way Traffic Sign (W6-3)

The following is added to this section:

Guidance:

The Two-Way Traffic (W6-3) sign should also be used at locations where motorists could perceive that they are on a one-way roadway when, in fact, they are on a two lane, two-way highway. Following are some typical situations:

- Construction sites where a two-lane highway is being converted to a freeway or an expressway.
- Two-lane, two-way highways where ultimate freeway or expressway right-of-way has been purchased and grading for the full width has been completed.
- Two-lane, two-way highways following long sections of multi-lane freeway or expressway.
- Two-way highway with edge lines but with no centerlines.

Standard:

The TWO WAY TRAFFIC (CA Code W44A) plaque, if used, shall be positioned below the W6-3 sign.

The Black on Yellow PASS WITH CARE sign (CA Code W83), when used, shall be positioned below the Two Way Traffic (W6-3) sign where two-way traffic is being routed over a single roadway of a divided highway and passing is permitted.

Support:

See Figure 3B-12 (CA) for signing and marking applications for lane reductions.

Typical example of W6-3 sign application is shown in Figure 3B-104.

Section 2C.36 Advisory Exit, Ramp, and Curve Speed Signs (W13-2, W13-3, W13-5)

Standard:

The Advisory Curve Speed (W13-5) sign is deleted.

This section is deleted and replaced with the following:

Guidance:

The Advisory Exit Speed (W13-2) sign should be placed on the right of exit ramps just beyond the neutral area (gore) to advise motorists of the speed at which the exit ramp can be comfortably negotiated. Consideration should also be given to the speed at which traffic can enter the surface street at the end of the ramp if a stop is not required.

Support:

The W13-2 sign is not necessary for an exit ramp that has tangent alignment and terminates at a stop sign or a signal.

Guidance:

The Advisory Ramp Speed (W13-3) sign should be placed on the right of the freeway to freeway connector ramps just beyond the neutral area (gore) where the ramps cannot be comfortably negotiated by motorists at approach speeds.

Where additional warning is needed for ramp curvature beyond the neutral area (gore), a curve warning sign and an advisory speed should be posted.

Standard:

The advisory speed shall be determined in accordance with Section 2C.101.

Section 2C.37 Intersection Warning Signs (W2-1 through W2-6)

The following is added to this section:

Option:

A bulb shape may be placed on the appropriate leg of the Cross Road (W2-1), Side Road (W2-2 or W2-3), T-Symbol (W2-4), or Y-Symbol (W2-5) advance intersection signs to indicate a “Dead End” condition. See Section 2C.21 for DEAD END (W14-1) sign.

Section 2C.38 Two-Direction Large Arrow Sign (W1-7)

The following is added to this section:

Guidance:

CA Type N-1 (OM1-3) object marker should be used below and on the same post as the W1-7 sign. Refer to Chapter 3C.

Figure 2C-8. Intersection Warning Signs

Standard:

The W25-1 and W25-2 signs are deleted. See Section 2C.39.

Section 2C.39 Traffic Signal Signs (W25-1, W25-2)

Standard:

This section is deleted. The “yellow trap” should be eliminated rather than trying to correct it with these signs. See Part 4 of This Supplement.

Section 2C.40 Vehicular Traffic Signs (W8-6, W11-1, W11-5, W11-5a, W11-8, W11-10, W11-11, W11-12, W11-14)

Standard:

The last Paragraph (“The Emergency Vehicle...”) is deleted. See Standard topic below.

The following is added to this section:

Guidance:

Vehicular Traffic signs should not be placed on the highway where the unexpected entry is located on an intersecting roadway.

Standard:

The Emergency Vehicle (W11-8) sign or the EMERGENCY VEHICLES sign (CA Code SW52) shall be used for all types of emergency vehicles.

Option:

The Snowmobile (W11-6) and Golf Cart (W11-11) signs may be used to alert road users to locations where unexpected entries into the roadway by snowmobiles or golf carts might occur, such as at snowmobile or golf cart crossings. Refer to CVC 38025. Also refer to CVC 21115.1.

The W11-11 sign may also be used in combination with the SHARE THE ROAD (W16-1) sign at locations where a local agency permits the sharing of the roadway with slower moving golf carts. Refer to CVC 21115.

Section 2C.41 Nonvehicular Signs (W11-2, W11-3, W11-4, W11-6, W11-7, W11-9)

The following is added to this section:

Support:

Refer to CVC 21805 for the Equestrian (W11-7) sign.

Refer to CVC 21364 and 21365 for the Cattle (W11-4) sign.

Standard:

The Pedestrian Crossing symbol (W11A-2) sign (CA Code W54) is deleted. The Pedestrian Crossing (W11-2) sign and a diagonal downward pointing arrow (W16-7P) plaque combination shall be used instead.

Option:

The existing W11A-2 signs may remain in place until maintenance is required or existing inventory is depleted.

Guidance:

The Deer Crossing (W11-3) sign should be used only after confirmation from a Department of Fish and Game warden having jurisdiction in the area that a substantial problem exists.

Option:

The Migrating Bears (CA Code SW59) sign may be used in advance of an area known to be inhabited by bear and there have been reported instances where bears are crossing the roadway.

Guidance:

If used, the NEXT XX MILES supplemental plaque should be placed at approximately 8 km (5 mi) intervals, or when intersecting major traffic generators.

Section 2C.42 Playground Sign (W15-1)

The following is added to this section:

Guidance:

The PLAYGROUND sign (CA Code SW49) should not be used alone.

Option:

The SW49 (CA Code) sign may be used in combination above the Speed Limit (R2-1 (25)) sign or WHEN CHILDREN ARE PRESENT (S4-2) sign on any street or road, other than a state highway, with a

speed limit greater than 25 mph that is adjacent to a children's playground within a public park. Refer to CVC 22357.1.

Section 2C.45 Distance Plaques (W16-2 series, W16-3 series, W16-4, W7-3a)

The following is added to this section:

Option:

The Distance Ahead (CA Code W34A) plaque may be used to inform the road user of the distance to the condition indicated by the warning sign.

Guidance:

When the distance is in miles, the mileage shown should be to the nearest 1/4 mile for a distance of less than 1 mile and to the nearest mile for distances over one mile. The text "MILE" should be used for a distance of one mile or less. The text "MILES" should be used for distances over one mile.

Section 2C.46 Advisory Speed Plaque (W13-1)

The following is added to this section:

Standard:

If used, the speed shown on the W13-1 plaque shall not be in excess of the posted or maximum speed limit. The advisory speed shall be determined in accordance with Section 2C.101.

The Advisory Speed Plaque shall not be used in conjunction with any sign other than a warning sign, nor shall it be used alone. When used, it shall be positioned below the warning sign.

Section 2C.48 Hill-Related Plaques (W7-2 Series, W7-3 Series)

The following is added to this section:

Option:

The WATCH DOWNHILL SPEED (CA Code SW4-1) sign may be used on long downhill grades to remind motorists to maintain the posted speed.

Section 2C.101 Advisory Speed on Curve and Turn Warning Signs

Guidance:

In determining the need for curve or turn warning signs, consideration should be given to driver expectancy based on the driving environment. If the curve can be driven at legal speed without discomfort, there is normally no need for a sign. A curve warning sign should be considered in advance of any curve that produces a reading of 16 degrees on a Ball Bank Indicator at speeds lower than the approach speed. If a curve warning sign is needed, it should be supplemented with an advisory speed message.

A mechanical or electronic Ball Indicator should be used to determine the advisory speed for curves.

Support:

This speed is shown on the Horizontal Alignment signs (see Section 2C.06), Combination Horizontal Alignment/Advisory Speed Signs (see Section 2C.07), Advisory Exit, Ramp, and Curve Speed Signs (see Section 2C.36) and Advisory Speed Plaque (see Section 2C.46).

Option:

The Advisory Speed (W13-1) plaque may also be used with a number of other warning signs.

Support:

See the sign policy for the Advisory Speed (W13-1) plaque in Section 2C.46 for more details.

One method of determining the advisory speed is to drive the curve at several selected uniform speeds and plot the Ball Bank Indicator readings as shown in Figure 2C-102.

Guidance:

A minimum of three speed runs should be made in each direction.

Support:

The limiting Ball Bank Indicator value for comfort is 16°.

Standard:

The speeds shown on the sign shall be in mph.

Guidance:

The speed shown on the sign should be in 5 mph increments to the lowest appropriate speed found for the condition.

Option:

The comfortable speed on horizontal curves chart shown in Figure 2C-103 may be used to check calculations or analyze curves on projects that are in the design stage.

Section 2C.102 ROUGH ROAD Sign (W8-8)**Option:**

The ROUGH ROAD (W8-8) sign may be used in advance of a section of rough road where a reduction in speed may be necessary for a motorist's comfort. It may be desirable to supplement this sign with an Advisory Speed (W13-1) plaque. Where the rough road is 1.6 km (1 mi) or more in length, the W8-8 sign may be supplemented with a Next Distance (W7-3a) plaque.

Section 2C.103 ICY Sign (CA Code W43)**Option:**

The ICY sign (CA Code W43) may be used in advance of locations where an icy condition requires extra caution.

Guidance:

The W43 (CA Code) sign should be used on mountain roads, which may be continuously in the shade and where ice forms during the greater part of the winter. This sign should be covered or removed at the end of the winter season or when the icy condition no longer exists. The sign should be located in advance of the beginning of the icy sections.

Section 2C.104 DRAW BRIDGE Sign (CA Code W49)**Standard:**

The DRAW BRIDGE sign (CA Code W49) shall be used in advance of all movable bridges to give motorists time to stop when the bridge is open.

Guidance:

Where physical conditions prevent a motorist driving at the legal speed limit from having a continuous view of at least one signal indication before reaching the stop line, an auxiliary device should be provided in advance of movable bridge signals and gates.

Option:

This device may be either a supplemental signal or the mandatory DRAW BRIDGE sign to which has been added a flashing yellow beacon interconnected with movable bridge control.

Section 2C.105 Slide Area Signs (CA Code W38, W50, W50-1 and SW41)**Option:**

The SLIDE AREA sign (CA Code W38) may be used in advance of where slides on the highway could be expected.

The SNOW SLIDE AREA sign (CA Code SW41) may be used in areas of known snow slide or avalanche activity.

The Next Distance (W7-3a) plaque may be used below the W38, W50, W50-1 and SW41 (CA Codes) signs.

Guidance:

The Rock Slide Area word message (CA Code W50) or symbol (CA Code W50-1) signs should be used where rocks from hillsides or cut slopes frequently fall on the traveled way.

Figure 2C-102. Determination of Comfortable Speed From Ball Bank Indicator Readings

Driver _____	Type of Pavement _____	Co. _____ Rte. _____ PM _____
Observer _____	Condition of Pavement _____	Sta. _____ To _____
Vehicle _____	Min. Sight Dist. Thru Curve _____	Direction _____
Date _____	Approach Speed _____	Weather _____
	(Estimated or Observed) _____	

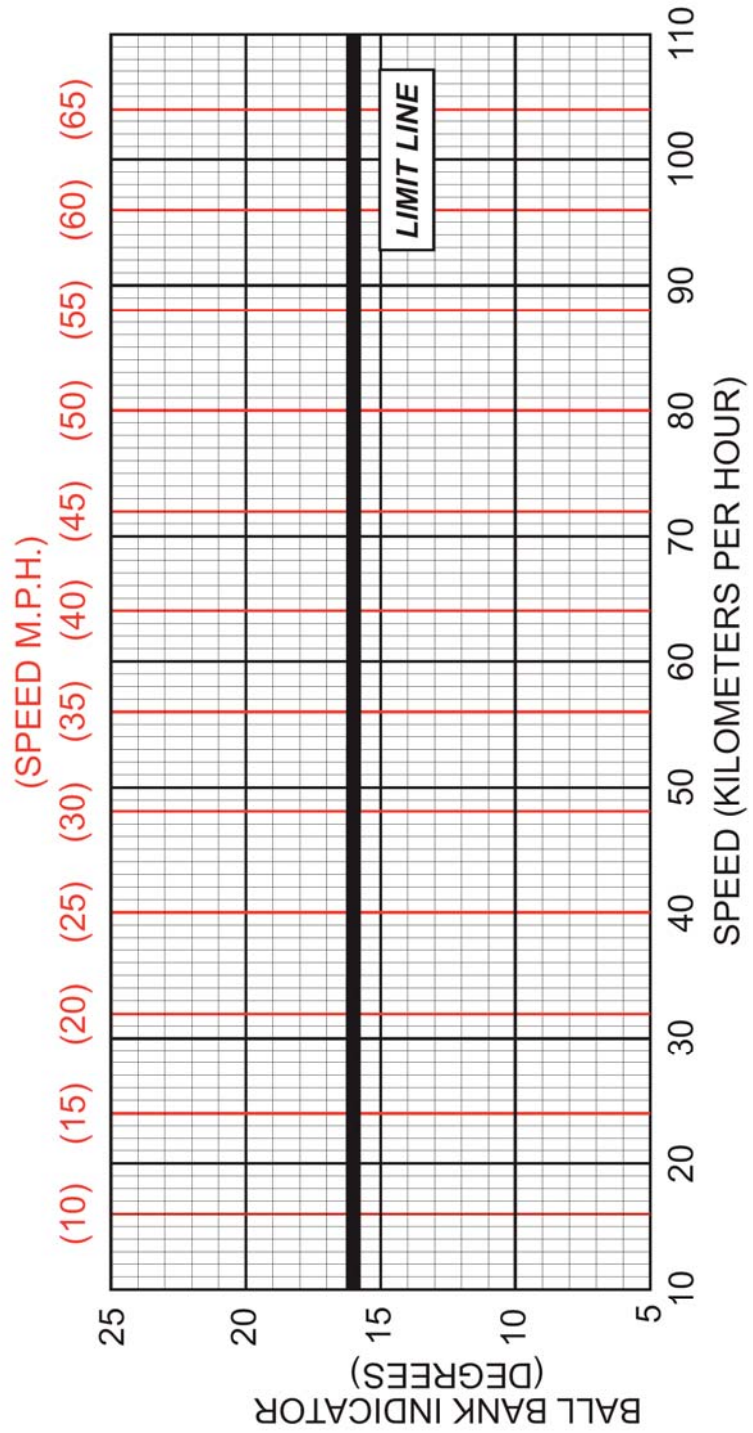
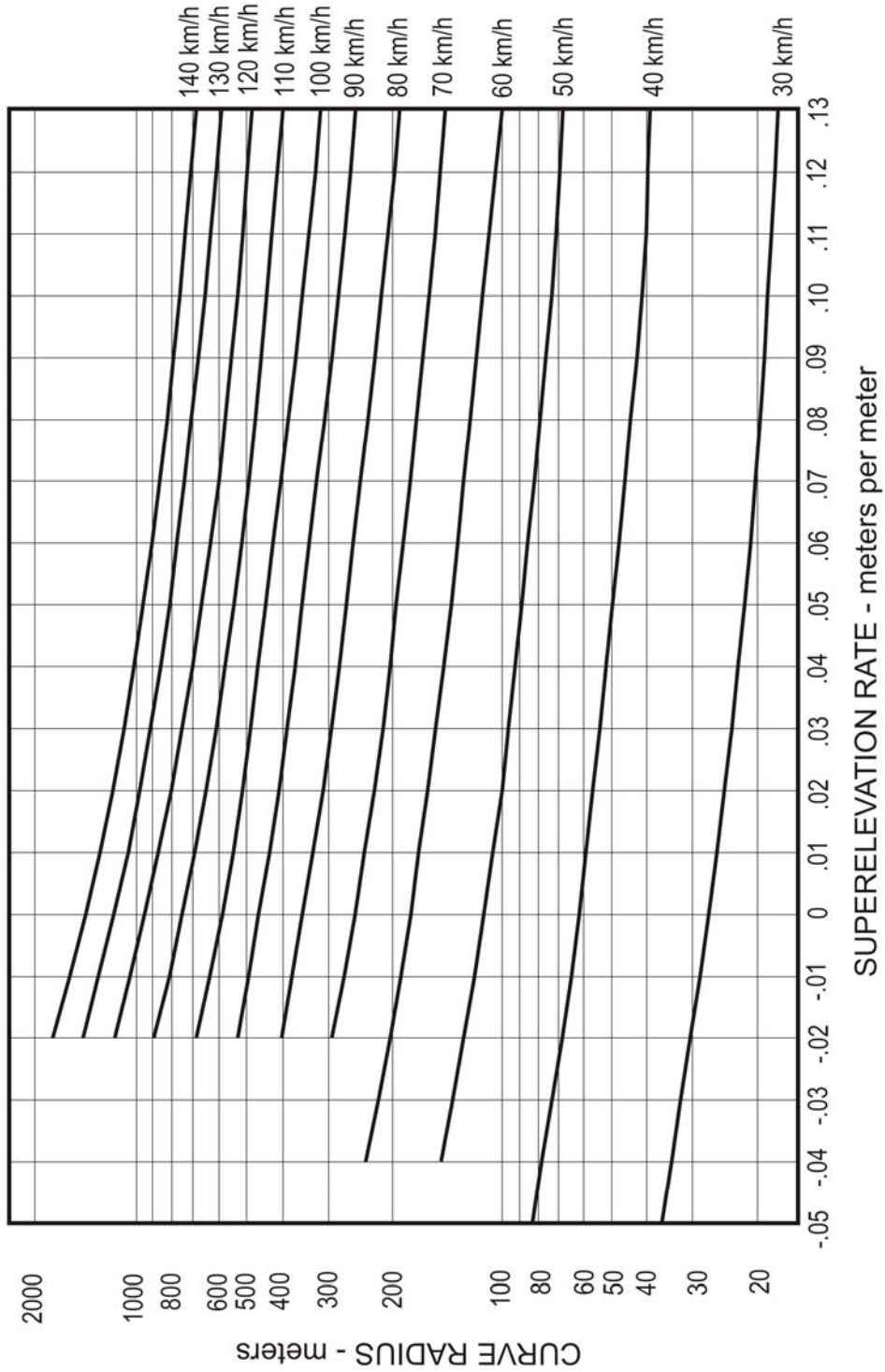
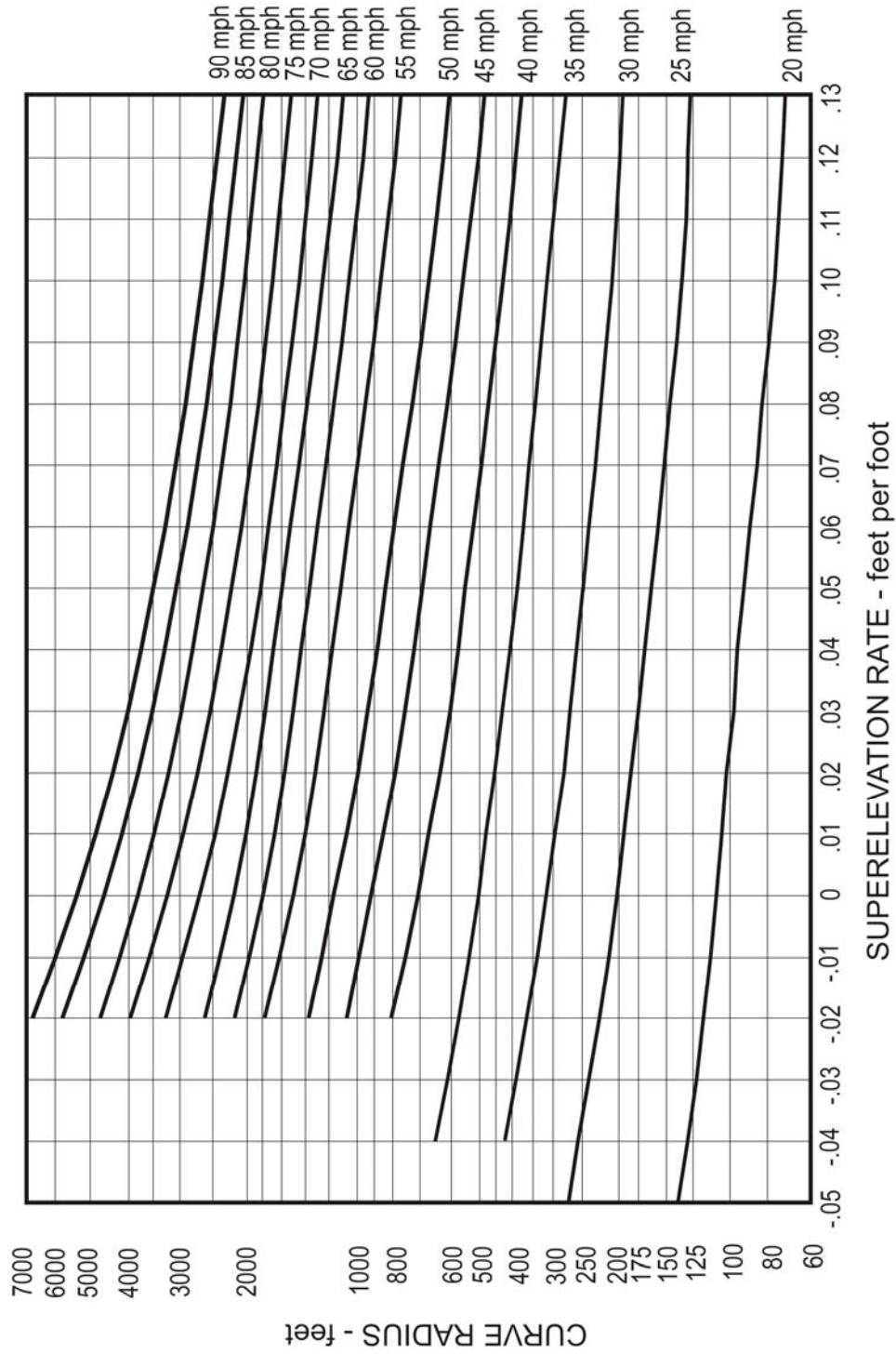


Figure 2C-103. Comfortable Speed on Horizontal Curves
(Metric Units)



Standard Superelevation Rates are shown in the Highway Design Manual on Table 202.2

Figure 2C-103. Comfortable Speed on Horizontal Curves
(English Units)



Standard Superelevation Rates are shown in the Highway Design Manual on Table 202.2

Section 2C.106 SLOW TRUCKS Sign (CA Code W51)

Option:

The SLOW TRUCKS sign (CA Code W51) may be used to inform drivers that slow moving trucks substantially interfere with the flow of traffic. The Next Distance (W7-3a) plaque may be used with the W51 (CA Code) sign.

Section 2C.107 Flood Signs (CA Codes W55, W55B and SW35)

Guidance:

The FLOODED sign (CA Code W55) should be used in advance of locations where the highway is flooded.

Standard:

The W55 (CA Code) signs shall be removed or covered when the condition no longer exists.

Option:

The SUBJECT TO FLOODING sign (CA Code W55B) may be used for signing in advance of locations where it is anticipated that the highway may periodically flood. A Next Distance (W7-3a) plaque may supplement this sign.

The FLASH FLOOD AREA sign (CA Code SW35) may be used in advance of depressions in the highway alignment that are subject to flash flooding.

Section 2C.108 END FREEWAY and CROSS TRAFFIC AHEAD Signs (CA Codes W69, W70 and SW36)

Guidance:

The END FREEWAY _____ MI sign (CA Code W69) should be used at locations where traffic leaving the freeway comes into a lower standard roadway. At problem locations dual installations with yellow flashing beacons or overhead installations should be considered. The W69 (CA Code) sign should also be used at transitions from freeways to expressways.

Option:

The END FREEWAY sign (CA Code SW36) may be used at locations where traffic leaving the freeway comes into a lower standard roadway. It may also be used where additional emphasis is needed for the W69 (CA Code) sign.

Guidance:

The CROSS TRAFFIC AHEAD sign (CA Code W70) should be used at locations where traffic leaves a freeway section and enters an expressway section to warn motorists that crossing at grade may be expected.

Option:

Where two sections of freeway are connected by a section of expressway of a relatively short distance, the Next Distance (W7-3a) plaque may be installed below the W70 (CA Code) sign.

Section 2C.109 Lane Drop Signs (CA Code W73, W73A and MUTCD Code W4-1a)

Standard:

The RIGHT (LEFT) LANE EXITS AHEAD sign (CA Code W73), shall be placed between the THRU TRAFFIC MERGE LEFT (RIGHT) sign (W4-1a) and the RIGHT (LEFT) LANE MUST EXIT sign (CA Code R18A), at locations where overhead Exit Only signs (E11-1 Series) are not in place for lane drops at freeway exit ramps.

Guidance:

On expressways, the RIGHT(LEFT) LANE TURNS RIGHT(LEFT) AHEAD sign (CA Code W73A) should be used in advance of the RIGHT(LEFT) LANE MUST TURN RIGHT(LEFT) sign (R3-7).

Option:

On expressways, the THRU TRAFFIC MERGE LEFT (RIGHT) sign (W4-1a) may be used in advance of the RIGHT(LEFT) LANE MUST TURN RIGHT(LEFT) sign (R3-7).

Guidance:

On conventional highways, the RIGHT(LEFT) LANE TURNS RIGHT(LEFT) AHEAD sign (CA Code W73A) and/or the THRU TRAFFIC MERGE LEFT (RIGHT) sign (W4-1a) should be used in advance of the RIGHT(LEFT) LANE MUST TURN RIGHT(LEFT) sign (R3-7).

Support:

See Figure 3B-12 (CA) for signs and lane reduction markings.

Standard:

The THRU TRAFFIC MERGE LEFT (RIGHT) sign (W4-1a) shall be used on freeways and expressways to inform motorists that the outside or inside lane is being dropped at the next exit, and through traffic must merge into the adjacent lane.

Guidance:

The W4-1a sign should not be used for a lane reduction.

Option:

The W4-1a signs may also be used on conventional highways.

Support:

See Figure 3B-10 (CA) for lane drop signing and markings at exit ramps.

Section 2C.110 DRIFTING SAND Sign (CA Code SW32)**Option:**

The DRIFTING SAND Sign (CA Code SW32) may be used to warn traffic of drifting sand on the roadway.

Section 2C.111 TUNNEL Sign (CA Code SW37)**Option:**

The TUNNEL Sign (CA Code SW37) may be used to warn road user that there is a tunnel ahead.

Section 2C.112 DEAF CHILDREN NEAR Sign (CA Code SW38)**Option:**

The DEAF CHILDREN NEAR sign (CA Code SW38) may be used on city streets or county roads to indicate that a deaf child is near. Refer to CVC 21351.7.

Section 2C.113 Downward Arrow Sign (CA Code SW44)**Option:**

The Downward Arrow sign (CA Code SW44) may be used where object markers (see Chapter 3C) may be ineffective, with the downward arrow either left or right, to mark obstructions in the roadway where traffic is permitted to pass on one side only.

Section 2C.114 GROOVED PAVEMENT Sign (CA Code SW45)**Option:**

The GROOVED PAVEMENT sign (CA Code SW45) may be used to alert motorcyclists and other road users of a roadway surface which has been grooved longitudinally to improve its wet weather traction.

Guidance:

Use of this sign should be limited to locations where experience indicates it is necessary to inform motorists of the existence of this type of surface.

Section 2C.115 Snow Signs (CA Code SW46 and SW58)**Option:**

The WATCH FOR SNOW SLIPPERY sign (CA Code SW46) may be used to warn road users of conditions where snow may be on the roadway surface, but chains are not yet required. The SW46 (CA

Code) sign may be placed in advance of areas where such conditions may exist, and intermittently as needed where such conditions may exist for long sections of highways.

The SW46 (CA Code) sign may be displayed when weather conditions are such that it would be reasonable to assume that snow on the roadway would be a possibility.

Guidance:

The SW46 (CA Code) sign should be removed when such conditions are no longer present.

Option:

The WATCH FOR SNOW REMOVAL EQUIPMENT (CA Code SW58) sign may be used on highways leading to snow areas.

Support:

The SW58 (CA Code) sign is normally placed at lower elevations where the first snow is usually encountered.

Guidance:

The SW58 (CA Code) sign should be covered or removed during the summer season.

Section 2C.116 OFF HIGHWAY VEHICLES Sign (CA Code SW47)

Option:

The OFF HIGHWAY VEHICLES sign (CA Code SW47) may be used in advance of a segment of highway that permits the use of regular vehicular traffic and also the driving of off highway motor vehicles on that portion of the highway.

Guidance:

A Next Distance (W7-3a) plaque should supplement this sign.

Section 2C.117 TRACTOR-SEMI OVER ____ FEET KINGPIN TO REAR AXLE NOT ADVISED Sign (CA Code SW48)

Option:

The TRACTOR-SEMI OVER ____ FEET KINGPIN TO REAR AXLE NOT ADVISED sign (CA Code SW48) may be used on certain specified conventional highways and freeways that have restricted turning radii.

Standard:

At freeway offramps to restricted conventional highways, the freeway sign shall be installed with a NEXT EXIT (CA Code SW 48-1) sign.

Guidance:

The SW48 (CA Code) sign should be located far enough in advance of the restricted area to allow the vehicle operator time to select an alternate route.

Option:

The NEXT RIGHT (CA Code SW48-1) sign or Next Distance (W7-3a) plaque may supplement the SW48 (CA Code) sign, as appropriate. Alternate messages for the SW 48-1 (CA Code) sign may be SECOND EXIT, SECOND RIGHT, NEXT LEFT or SECOND LEFT.

Section 2C.118 SENIOR CITIZEN FACILITY Sign (CA Code SW50)

Guidance:

The SENIOR CITIZEN FACILITY sign (CA Code SW50) should not be used alone.

Option:

The SW50 (CA Code) sign may be used in combination, above the Speed Limit (R2-1 (25,20 or 15)) sign on any street or road, other than a State highway, with a speed limit greater than 40 km/h (25 mph) that is adjacent to a senior citizen facility. Refer to CVC 22352 and 22358.4.

Section 2C.119 HOV Signs (CA Code W11-1, W59-1, W72B, W74-1, W75-1, SW54, SW54-1, SW54A, SW54B and SW54C)**Guidance:**

The HOV Lane Reduction (CA Code W11-1) sign should be used to warn of a reduction in the number of HOV lanes.

The HOV Merge sign (CA Code W59-1) should be used in advance of locations where HOV lanes converge. This includes HOV drop ramps where high speeds and volumes prevail and merging or weaving must be accomplished in a relative short distance.

The HOV Advisory Exit (Ramp) Speed (CA Code W72-B) sign when used, should be placed on the left of an HOV drop ramp or freeway to freeway connector to advise motorists of the speed at which the drop ramp or freeway to freeway connector can be comfortably negotiated.

The HOV THRU TRAFFIC MERGE LEFT (RIGHT) sign (CA Code W74-1) should be used to inform motorists that the outside or inside lane of an HOV facility with two or more directional HOV lanes is being dropped at the next exit and through HOV traffic must merge into the adjacent HOV lane. This sign should not be used for a lane reduction.

The HOV LANE ENDS MERGE LEFT (RIGHT) sign (CA Code W75-1) should be used on an HOV facility to warn of the reduction in the number of HOV lanes.

Option:

The HOV Lane Selection signs (CA Codes SW54 and SW54-1) may be used as an advance warning that motorists will have to choose whether or not to be in a carpool lane. These signs may be used where geometrics make entrapment likely or where there is a history of vehicles being entrapped in a carpool lane.

Guidance:

The SW54 and SW54-1 (CA Codes) signs should not be used at the entrance of a carpool lane.

SW54B or SW54C (CA Codes) signs so that motorists can determine if they are eligible to use the carpool lane.

Section 2C.120 TRAILERS-CAMPERS-GUSTY WIND AREA NEXT ____ MILES Sign (CA Code SW17-1)**Option:**

The TRAILERS-CAMPERS-GUSTY WIND AREA NEXT ____ MILES (CA Code SW17-1) sign may be used where known or potential wind collision problems exist.

Section 2C.121 STEEL BRIDGE DECK Sign (CA Code SW28)**Guidance:**

The STEEL BRIDGE DECK (CA Code SW28) sign should be placed in advance of a bridge that has a roadway surface fabricated in steel to alert the road user of a potential change in vehicle handling characteristics.